

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(oracle01.013)

5 **Applicant:** Alpern, et al. **Confirmation No.:** 7766

Application No: 09/881,501 **Group Art Unit:** 2171

Filed: 6/14/01 **Examiner:** E.P. Leroux

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Title: *Redirection of misses in queryable caches*

15 Commissioner for Patents
 Alexandria, VA 22313-1450

Response to Notification of Non-Compliant Appeal Brief

20 On 2/7/07, Examiner mailed a third *Notification of Non-Compliant Appeal Brief* in
 which Examiner objected to the brief on the following grounds:

 Applicant is required to map each and every limitation of claim 5 and
 claims 6 and 19. Regarding claims 6 and 19, examiner is unable to find
25 the limitation "determines that an object required for execution of the
 request is lacking in the particular database system." Furthermore,
 Applicant fails to address the actual limitations of claims 6 and 10. Still
 further, Applicant is requested to explain the existence of claim 27 on
 page 3 of the [response to Examiner's second *Notification of non-*
30 *compliant appeal brief*].

 As permitted by MPEP 1205.03(A), Applicants are complying with the above
 requirement by providing a rewritten section (5) *Summary of claimed subject matter*
 that contains the additional information.

(5) Summary of claimed subject matter

The claimed subject matter concerns redirection of query execution in a distributed database system made up of two or more database systems. A distributed database system that embodies the invention is shown at 201 in FIG. 2 and described beginning at page 12, line 10 of Applicants' Specification. Database system 201 includes a redirecting database system 203 and a redirection target database system 229. As is clear from page 13, lines 26-27, the term "database system" in the context of the patent application means a system that includes a query engine 205 and a database 220 and is thus able to independently execute a query.

Subject matter of the independent claims

There are two independent claims: claim 15, which claims the invention in apparatus form, and claim 5, which claims it in method form. Claim 15 reads as follows. Reference numbers are added for the convenience of the Appeals Board and are not intended to limit the scope of the claim:

15. (currently amended) Apparatus that redirects at least a part of a request (204) received in a particular database system (203) belonging to a distributed database system (201) to another database system (229) in the distributed database system,
the apparatus comprising:
a request analyzer (205, component 305) in the particular database system that determines that the request is preferably executed at least in part in the other database system; and
a redirector (207) in the particular database system that redirects execution of at least the part of the request to the other database system.

Operation of the apparatus of claim 15 is described in overview at page 14, line 18 through page 15, line 10. Details of a preferred embodiment are disclosed beginning at page 14, line 11 and shown in FIG. 3.

Claim 5 reads as follows:

5. (currently amended) A method employed in a distributed database system that includes a plurality of database systems for responding to a request received in a particular database system of the plurality,
the method comprising the steps performed during execution of the request in the particular database system of:
determining whether the execution of the request is preferably done at least in part in another database system of the plurality (415 in FIG. 4; 509 in FIG. 5); and

9 if that is the case, redirecting that part of the execution to the other
 10 database system (417,433,434,435,427,437 in FIG. 4; 515, 517,525,527,
 11 531 or 533, 535 in FIG. 5).

The claimed method is disclosed at page 12, line 23-page 13, line 14; page 13, lines 8-14 set forth a variety of situations in which redirection may occur. Detailed flowcharts for the method in a preferred embodiment are shown in FIG. 4, which is addressed to the situation in which a database object such as a table is not present, and
 5 FIG. 5, which is addressed to the situation in which a stored procedure is non-local. FIGs. 4 and 5 are discussed beginning at page 18, line 16.

Subject matter of separately-argued dependent claims 6,19; 7,16; 8,17; 9,18

These claims are presented as pairs of claims: the first member of the pair presents an
 10 additional limitation as an additional limitation to independent method claim 5; the second member presents the corresponding additional limitation as an additional limitation to independent apparatus claim 15. The discussions of the rejections of these claims are similarly arranged.

15 Claims 6 and 19

These claims add the limitations

 the request includes one or more specifiers referring to objects
 belonging to a plurality thereof in the distributed database system; and
 20 the step of determining whether the execution of the request is preferably done in the other database system determines that an object required for execution of the request is lacking in the particular database system.

The specifiers are names in the request which refer to objects in the database system.
 25 For example, in the SQL statement at the bottom of page 3, emp_pay and emp_name specify columns of the table Employees. emp_pay, emp_name, and Employees are thus examples of the limitation's "specifiers referring to objects". The limitation, "the step of determining ... determines that an object required for execution of the request is lacking in the particular database system" is
 30 disclosed at page 13, lines 9 and 10

Claims 7 and 16

The added limitations here are that the particular database system “places the request in a form required for execution in the particular database system” and then modifies the form when it has been determined that redirection is required. The Specification discloses two embodiments of the claimed modification of the “form required for execution in the particular database system”: one for cursors and one for PL/SQL calls to stored procedures. The embodiment for cursors is shown at 433 in FIG. 4 and explained beginning at page 18, line 15. The embodiment for PL/SQL calls to stored procedures is shown at 531-535 in FIG. 5 and explained beginning at page 19, line 29.

Claims 8 and 17

Additionally, with regard to claims 8 and 17, the added limitations are that “the request includes an SQL statement” and that “the form required for execution is a cursor” and that “the cursor is marked for redirection”. These claims thus address the cursor species of the genus of claims 7 and 16 and their additional limitations are disclosed as indicated above at 433 in FIG. 4 and explained beginning at page 18, line 15.

Claims 9 and 18

The added limitations here are that the request “includes a call to a procedure object” and “the call is rewritten in the form required for execution as a remote procedure call directed to the other database system.” These claims thus address the PL/SQL stored procedure call species of the genus of claims 7 and 16 and their additional limitations are disclosed as indicated above at 531-535 in FIG. 5 and explained beginning at page 19, line 29.

Conclusion

Applicants have responded to the *Notification of Non-compliant Appeal Brief* by providing a new section (5) *Summary of claimed subject matter* which replaces "claim 27" with --claim 5-- and amends the summaries for separately-argued dependent claims 6,19; so that it correctly sets forth the added limitations and correctly states where support for these limitations may be found in the Specification. The brief is consequently now compliant with 37 C.F.R. 41.37. Applicants consequently request that Examiner and the Board proceed with the appeal. No fees are believed to be required. Should any be, please charge them to deposit account #501315.

Respectfully submitted,

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